

Abstract of the Disclosure

A distinctive optical fiber comprises an optical fiber core, distinctive layers, and a colored layer. A plurality of the distinctive layers including fine drops of ink having a specific particle size is disposed intermittently on the optical fiber core in the longitudinal direction of the optical fiber core. The colored layer is disposed on the distinctive layers and on the optical fiber core on which the distinctive layers are not disposed. The following five requirements are required for obtaining the distinctive optical fiber excellent in distinctiveness and with low transmission loss. The thickness of the colored layer is chosen so as to be larger than or equal to 2 μm and smaller than or equal to 10 μm . The thickness of the distinctive layers is chosen so as to be larger than or equal to 0.5 μm and smaller than or equal to 2.5 μm . The length of the distinctive layers is chosen so as to be larger than or equal to 1mm and smaller than or equal to 15mm. The interval of the distinctive layers is chosen so as to be in the range between 1mm and 200 mm. The occupied ratio of the distinctive layers is chosen so as to be less than or equal to 20 %. The major diameter of the fine drops of ink is chosen so as to be larger than or equal to 100 μm and smaller than or equal to 400 μm .